What is claimed is:

1. A system for reducing wear on a compressor diaphragm comprising:

a substantially semi-cylindrical compressor shell having a radially outer peripheral surface, a radially inner peripheral surface, two circumferential ends, an axial upstream end and an axial downstream end, wherein the shell includes a slot extending along the radially inner peripheral surface from one circumferential end to the other circumferential end, wherein the shell further includes at least one recess located substantially at one of the circumferential ends, the recess opening into the slot in the direction of one of the axial ends of the shell;

a diaphragm including an outer shroud with a plurality of airfoils extending radially therefrom, the outer shroud having a forward face and an aft face, wherein the outer shroud is received within the slot in the compressor shell; and

a load applying member disposed within the recess, wherein the member exerts an axial force on one of the faces of the outer shroud in the direction of one of the axial ends of the shell.

2. The system of claim 1 wherein the circumferential ends are substantially horizontal.

3. The system of claim 1 wherein the recess opens into the slot toward the axial upstream end of the shell, whereby the load applying member exerts an axial force on the aft face of the outer shroud in the axial upstream direction.

4. The system of claim 1 wherein the recess opens into the slot toward the axial downstream end of the shell, whereby the load applying member exerts an axial force on the forward face of the outer shroud in the axial downstream direction.

5. The system of claim 1 wherein the load applying member is a wedge block.

6. The system of claim 1 wherein the wedge block includes an elongated first wedge block having an outer face and an inner face, each face extending along the length of the first wedge block, the inner face being substantially concave; and

an elongated second wedge block having an outer face and an inner face, each face extending along the length of the second wedge block, the inner face being substantially concave, the second wedge block including a protrusion extending from the at least a portion of the outer face,

wherein the first wedge block is positioned substantially adjacent to the second block such that the concave inner faces face each other, the concave inner faces tapering toward each other along a portion of the length of the first and second wedge blocks so as to define a tapered region,

wherein at least one cutaway is formed in at least one of the inner faces along a portion of the length of at least one of the first and second wedge blocks.

7. The system of claim 6 wherein the recess is shaped to permit substantially only axial movement of the second wedge block.

8. The system of claim 6 wherein the tapered region is a self-holding taper.

9. The system of claim 6 further including a wedge pin, the pin including am upper region transitioning to a tapered region, wherein the pin is lockingly received between the first and second wedge blocks when the tapered region of the pin engages the tapered region of the first and second wedge blocks.

10. A wedge block apparatus for applying an axial preload on a compressor diaphragm comprising:

an elongated first wedge block having an outer face and an inner face, each face extending along the length of the first wedge block, the inner face being substantially concave; and

an elongated second wedge block having an outer face and an inner face, each face extending along the length of the second wedge block, the inner face being substantially concave, the second wedge block including a protrusion extending from at least a portion of the outer face,

wherein the first wedge block is positioned substantially adjacent to the second block such that the concave inner faces face each other, the concave inner

faces tapering toward each other along a portion of the length of the first and second wedge blocks so as to define a tapered region,

wherein at least one cutaway is formed in at least one of the inner faces along a portion of the length of at least one of the first and second wedge blocks.

11. The wedge block apparatus of claim 10 wherein the cutaway is formed substantially in the tapered region.

12. The wedge block apparatus of claim 10 wherein the first and second wedge blocks define first and second sidewalls, the cutaways being formed in the sidewalls substantially in the tapered region.

13. The wedge block apparatus of claim 10 wherein the tapered region is a self-holding taper.

14. The wedge block apparatus of claim 13 wherein the self-holding taper is no more than about 6 degrees included.

15. The wedge block apparatus of claim 13 wherein the self-holding taper is at least about 6 degrees included.

16. The wedge block apparatus of claim 10 further including a pin, the pin including an upper region transitioning to a tapered region, wherein the pin is lockingly received between the first and second wedge blocks when the tapered region of the pin engages the tapered region of the first and second wedge blocks, whereby, as the pin is driven in between the first and second blocks, the cutaway substantially prevents transmission of the pin load to cause lateral movement of the first and second wedge blocks.

17. The wedge block apparatus of claim 16 wherein the tapered region of the pin is a self-holding taper.

18. The wedge block apparatus of claim 17 wherein the self-holding taper is no more than about 6 degrees included.

19. A method of reducing wear on a compressor diaphragm comprising the steps of:

providing a substantially semi-cylindrical compressor shell having a radially outer peripheral surface, a radially inner peripheral surface, two circumferential ends, an axial upstream end and an axial downstream end, wherein the shell includes a slot extending along the radially inner peripheral surface from one circumferential end to the other circumferential end, wherein the shell further includes at least one recess located substantially at one of the circumferential ends;

providing a diaphragm including an outer shroud with a plurality of airfoils extending radially therefrom, the outer shroud having a forward face and an aft face, wherein the outer shroud is received within the slot in the compressor shell; and

applying a substantially axial force on one of the faces of the outer shroud in the direction of one of the axial ends of the shell, wherein the force is applied substantially at the horizontal joint at each circumferential end of the compressor shell.

20. The method of claim 19 wherein the step of applying a substantially axial force includes the steps of:

providing at least one recess in the shell located substantially at one of the circumferential ends, wherein the recess opens into the slot in the direction of one of the axial ends of the shell; and

inserting an axial load applying member in the slot such that the member applies an axial load on the outer shroud of the diaphragm.